

WE CLAIM:

1. A personal hydration system kit, comprising:

a reservoir having a body portion with an internal compartment adapted to receive a volume of drink fluid, wherein the reservoir includes a selectively sealable fill port having an opening through which drink fluid may be added to or removed from the compartment; and

an elongate downstream assembly extending in fluid communication with the reservoir to define a fluid conduit through which drink fluid may be drawn from the compartment for drinking by a user, wherein the downstream assembly comprises a plurality of fluidly interconnected components selected from the group consisting of a length of hollow drink tubing through which drink fluid may flow, an on/off valve adapted to selectively obstruct the fluid conduit and prevent drink fluid from flowing therethrough, a mouthpiece adapted to dispense drink fluid to a user's mouth, a bite-actuated mouthpiece adapted to dispense drink fluid to a user's mouth upon receipt of user-applied compressive forces to the mouthpiece, an exit port adapted to fluidly interconnect the downstream assembly and the reservoir to permit drink fluid to be drawn from the compartment into the downstream assembly, a gas mask fitting adapted to fluidly interconnect a quick-connect assembly with an intake tube of a gas mask; a filter adapted to selectively remove impurities from the drink fluid flowing therethrough, a refill station adapted to deliver drink fluid to the reservoir through the downstream assembly, and a pump adapted to selectively propel drink fluid through the downstream assembly, and further wherein the downstream assembly further includes at least one quick-connect assembly kit adapted to fluidly interconnect at least two of the plurality of components, wherein the quick-connect assembly kit comprises:

at least one male coupling member having a shaft that includes a tip and which defines at least a portion of a fluid conduit, wherein the male coupling member includes a region distal the tip with a port through which drink fluid may selectively flow into or out of the assembled quick-connect assembly, and further wherein the region includes a mount;

at least one female coupling member having a body with an opening sized to receive at least the tip of a male coupling member, wherein the opening is in fluid communication with a cavity that extends through the female coupling member to a region distal the opening that includes a port through which drink fluid may selectively flow into or out of the assembled quick-connect assembly, wherein the region includes a mount;

a lock member adapted to releasably and fluidly interconnect a male coupling member and a female coupling member, wherein the lock member is selectively configured between a locked configuration, in which the lock member is configured to retain the male and the female coupling members in fluid interconnection with each other, and an unlocked configuration, in which the lock member is configured to permit the male coupling member to be selectively removed from and inserted into the cavity of the female coupling member;

wherein the mount of a first one of the male and the female coupling members is adapted to be fluidly interconnected with a first one of the plurality of components upstream from a second one of the male and the female coupling members, and further wherein the kit includes at least a pair of the second one of the male and the female coupling members, with the mount of one of the second one of the male

and the female coupling members being adapted to fluidly interconnect the assembly with at least a second one of the plurality of components, and

further wherein upon configuring the lock member to its unlocked configuration, the second one of the male and the female coupling members may be selectively and interchangeably fluidly interconnected with the first one of the male and the female coupling members.

2. The kit of claim 1, wherein the lock member is biased to the locked configuration.

3. The kit of claim 1, wherein the lock member is adapted to engage a portion of the male coupling member that is inserted into the opening and prevent removal of the portion of the male coupling member from the opening.

4. The kit of claim 3, wherein the lock member includes at least one release member adapted to configure the lock member to release the portion of the male coupling member upon receipt of a user-applied force to the release member.

5. The kit of claim 4, wherein the at least one female coupling member includes at least one aperture through which the at least one release member at least partially extends.

6. The kit of claim 5, wherein the at least one release member is biased to extend at least partially through the aperture, and further wherein upon urging of the release member into the aperture, the lock member is urged to a configuration in which the portion of the male coupling member is released for removal from the opening.

7. The kit of claim 6, wherein the lock member includes a resilient lock ring adapted to be housed within the female coupling member and including a passage that extends through the lock ring, wherein the lock ring is adapted to selectively engage and prevent removal of the shaft of the male coupling member when the shaft of the male coupling member is at least partially inserted into the passage, wherein in the unlocked configuration the passage is configured to permit the tip of the male coupling member to pass through the passage, wherein in the locked configuration the passage is configured to restrict the tip of the male coupling member from passing through the passage, and further wherein the lock ring is biased to the locked configuration.

8. The kit of claim 7, wherein the at least one release member projects from the lock ring, and further wherein the lock member is configured to the unlocked configuration when the release member is urged generally toward the lock ring.

9. The kit of claim 8, wherein the lock member includes a single release member.

10. The kit of claim 9, wherein the lock member further includes a projection that extends from the lock ring and which is adapted to be engaged by a mount associated with the female coupling member to position the lock ring within the female coupling member.

11. The kit of claim 8, wherein the lock member includes a pair of generally opposed release members.

12. The kit of claim 11, wherein the female coupling member includes a pair of apertures through which the pair of release members at least partially extend.

13. The kit of claim 8, wherein the female coupling member further includes a guard that extends at least partially around the at least one aperture and projects from the body of the female coupling member to restrict unintentional urging of the lock member to the unlocked configuration.

14. The kit of claim 1, wherein at least one of the female coupling member and the male coupling member shares a common housing with at least one of the plurality of components.

15. The kit of claim 1, wherein at least one of the female coupling member and the male coupling member includes at least one of the plurality of components integrally formed therewith.

16. The kit of claim 1, wherein the kit further includes at least three of the second one of the male and the female coupling members.

17. The kit of claim 1, wherein at least one of the second one of the male and the female coupling members includes an on/off valve adapted to selectively obstruct the fluid conduit to prevent drink fluid from flowing therethrough.

18. The kit of claim 1, wherein at least one of the second one of the male and the female coupling members includes a barbed mount adapted to receive a length of drink tubing.

19. The kit of claim 1, wherein at least one of the second one of the male and the female coupling members includes a mouthpiece.

20. The kit of claim 1, wherein at least one of the second one of the male and the female coupling members includes a fitting adapted to receive a mouthpiece.

21. The kit of claim 1, wherein at least one of the second one of the male and the female coupling members includes a fitting adapted to receive a length of tubing in fluid communication with a filter.

22. The kit of claim 1, wherein the first and the second ones of the plurality of components are the same.

23. The kit of claim 1, wherein the first and the second ones of the plurality of components are not the same.

24. The kit of claim 1, wherein the second one of the plurality of components includes a filter.

25. The kit of claim 1, wherein the second one of the plurality of components includes a pump.

26. The kit of claim 1, wherein the second one of the plurality of components includes a refill station adapted to deliver drink fluid to the reservoir through the downstream assembly.

27. The kit of claim 1, further comprising includes a pack in which the reservoir is housed.

28. The kit of claim 1, in combination with a gas mask having an input tube coupled to the mount of the other of the second one of the male and the female coupling members.

29. The kit of claim 28, wherein at least a substantial portion of the hydration system kit is formed from a chemically resistant material.

30. A quick-connect kit for forming an assembled quick-connect assembly that defines a fluid conduit through which drink fluid may flow, the kit comprising:

at least one male coupling member having a shaft that includes a tip and which defines at least a portion of a fluid conduit, wherein the male coupling member includes a region distal the tip with a port through which drink fluid may selectively flow into or out of the assembled quick-connect assembly, and further wherein the region includes a mount;

at least one female coupling member having a body with at least one aperture and an opening sized to receive at least the tip of a male coupling member, wherein the opening is in fluid communication with a cavity that extends through the female coupling member to a region distal the opening that includes a port through which drink fluid may selectively flow into or out of the assembled quick-connect assembly, wherein the region includes a mount;

a lock member adapted to releasably and fluidly interconnect a male coupling member and a female coupling member, wherein the lock member comprises:

a resilient lock ring that is adapted to be housed within the female coupling member and which includes a passage extending through the lock ring, wherein the lock ring is adapted to selectively engage and prevent removal of the shaft of the male coupling member when the shaft of the male coupling member is at least partially inserted into the passage, wherein the lock ring is selectively deformable between an unlocked configuration, in which the tip of the male coupling member may pass through the passage, and a locked configuration, in which the tip of the male coupling member

may not pass through the passage, and further wherein the lock ring is biased to the locked configuration;

and at least one release member adapted to configure the lock ring to the unlocked configuration upon receipt of an external force urging the release member generally toward the lock ring, wherein the at least one release member extends at least partially through the at least one aperture of the female coupling member to position the release member for access from external the female coupling member, wherein the at least one release member is biased to extend at least partially through the at least one aperture;

wherein the mount of a first one of the male and the female coupling members is adapted to be fluidly interconnected with a tube assembly of a hydration system upstream from a second one of the male and the female coupling members, and further wherein the kit includes at least a pair of the second one of the male and the female coupling members, with the mount of one of the second one of the male and the female coupling members being adapted to fluidly interconnect the assembly with at least one of a length of drink tubing and a mouthpiece and the mount of the other of the second one of the male and the female coupling members being adapted to fluidly interconnect the assembly with an intake tube of a gas mask, and

further wherein upon configuring the lock member to its unlocked configuration, the second one of the male and the female coupling members may be selectively and interchangeably fluidly interconnected with the first one of the male and the female coupling members.

31. The kit of claim 30, wherein the at least one release member projects from the lock ring, and further wherein the lock member is configured to the unlocked configuration when the release member is urged generally toward the lock ring.

32. The kit of claim 31, wherein the lock member includes a single release member.

33. The kit of claim 32, wherein the lock member further includes a projection that extends from the lock ring and which is adapted to be engaged by a mount associated with the female coupling member to position the lock ring within the female coupling member.

34. The kit of claim 31, wherein the lock member includes a pair of generally opposed release members.

35. The kit of claim 34, wherein the female coupling member includes a pair of apertures through which the pair of release members at least partially extend.

36. The kit of claim 30, wherein the female coupling member further includes a guard that extends at least partially around the at least one aperture and projects from the body of the female coupling member to restrict unintentional urging of the lock member to the unlocked configuration.